

REMARKS

In view of the following remarks, reconsideration of the rejections contained in the Office Action of October 28, 2009 is respectfully requested.

In the outstanding Office Action, the Examiner rejected all of the pending claims as being anticipated by the Leonard reference (USP 2,627,939) and/or the Davis reference (USP 2,550,535). However, the Examiner has apparently overlooked several important features recited in presently-pending independent claim 17 that are not taught or even suggested in these prior art references. Therefore, for the reasons discussed below, the Examiner's new prior art rejections are respectfully traversed.

The present invention as recited in independent claim 17 is directed to a distributor element in which the relief pressure (residual pressure) will be significantly higher than that of a known distributor element, without an increase in the minimum operating pressure (see page 2, lines 11-15 of the original specification). This purpose is achieved by arranging a combination of components in the particular manner set forth in the claims. A discussion of the combination of components, including the structural relationship between the individual components, and the resulting advantages achieved therefrom will now be provided below with reference to various portions of the present application. However, reference to any specific drawings or sections of the specification is provided only for illustrative purposes, and is not intended to otherwise limit the scope of the claims to any particular embodiments.

As illustrated in Figure 1, the distributor element of independent claim 17 comprises a valve piston 1 having a bore 2, 8 for allowing lubricant to flow therethrough (see page 6, lines 25-29); a first return spring 7 for applying a pressure against the valve piston 1 to oppose pressure from the lubricant entering the housing 14 through the lubricant inlet 6 (see page 8, lines 9-12 of the original specification); a second return spring 10 for applying a pressure against a dispensing piston 9 to oppose the pressure from the lubricant within a metering chamber 4 (see page 8, lines 18-20 of the original specification); and a hollow supporting body 12 arranged within the housing between the first return spring 7 and the second return spring 10 *such that the hollow supporting body supports and provides leverage for each of the first return spring 7 and the second return spring 10* (see page 6, lines 19-22 and page 7, lines 6-8 of the original specification).

Furthermore, the above-mentioned components are arranged in a very specific manner, and this arrangement is described in independent claim 17 using functional language. In the outstanding Office Action, the Examiner referred to the functional language as merely describing “intended use”. However, the Examiner is reminded that functional language is entitled to patentable weight provided that the functional language describes the *structure* of the claimed device. See, e.g., *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 52 USPQ2d 1001 (Fed. Cir.). Because mere “intended use” does not describe the structure of the claimed device, the Applicants do not acquiesce to the Examiner’s characterization of the functional language in independent claim 17 as “intended use.” Instead, the Applicants submit that this functional language clearly describes *structure* which is necessary to meet the limitations of independent claim 17.

More specifically, independent claim 17 requires that the various components be structurally arranged in such a way that the valve piston is operable to move within the housing and be positioned so as to meet the functional claim limitations. For example, in the valve piston starting position as set forth in claim 17, the valve piston is positioned such that the *bore of the valve piston* allows a dispensing chamber between the dispensing piston and the valve piston to communicate with the metering chamber via a connecting passage (see page 9, lines 13-18 of the original specification, and Figure 1). In the intermediate position, the *valve piston blocks the lubricant inlet from communicating with the metering chamber via the connecting passage*, and blocks the dispensing chamber from communicating with the metering chamber via the connecting passage (see page 9, lines 1-7 of the original specification). Further still, the distributor element must have a structure such that, upon pressure relief at the lubricant inlet (i.e., a decrease in pressure), the valve piston 1 is operable to be moved back from the intermediate position to the valve piston starting position *by the first return spring* (see page 9, lines 13-16 of the original specification). All of this functional language sets forth requirements for the structural relationship among the individual components of the distributor element. If the structure of the prior art is not capable of performing this function due to an alternate arrangement, then the prior art does not meet the limitation.

The Leonard Reference

The Leonard reference teaches a lubricant feeder valve. However, as will be explained below, the Leonard reference fails to teach or even suggest (1) a valve piston *having a bore*; (2) a hollow supporting body arranged as recited in claim 17; or (3) a valve piston structured within a distributor element so as to be operable to move within a housing (i.e., perform the necessary functions) as recited in independent claim 17.

Firstly, the Examiner asserted that the cup-shaped valve 48 constitutes the valve piston of the present invention. Although the valve 48 has a recess, the valve 48 of the Leonard reference does not have a *bore for allowing lubricant to flow therethrough* (i.e., through the valve), as required by independent claim 17.

Furthermore, the Examiner identified spring seat 46 as corresponding to the hollow supporting body of the present invention. However, spring seat 46 is clearly not arranged within a housing *such that the hollow supporting body supports and provides leverage for each of a first return spring and a second return spring*. At best, the spring seat 46 provides support and leverage for only the second return spring 58, while spring seat 36 provides support and leverage for first return spring 52.

Finally, the Examiner identified the chamber between the “dispensing piston” 54 and the valve seat 46 as the dispensing chamber, and identified the “metering chamber” as the area around rivet head 57 above the cylinder 24. Under this interpretation, however, the dispensing chamber identified by the Examiner will not communicate with the metering chamber located above the dispensing piston 54 as identified by the Examiner regardless of the arrangement of the valve piston 48. In other words, the valve piston 48 of the Leonard reference cannot be positioned in a valve piston starting position such that the bore of the valve piston allows the dispensing chamber to communicate with the metering chamber via a connecting passage, as required by claim 17. Moreover, the valve piston 48 cannot be moved back from an intermediate position to a valve piston starting position by the first return spring 52 so as to allow the dispensing chamber to communicate with the metering chamber, as also required by independent claim 17.

As explained above, the Leonard reference does not teach several of the specific limitations recited in independent claim 17. Therefore, the Leonard reference clearly does not anticipate claim 17. Moreover, because the particular features recited in claim 17 are not even

suggested by the Leonard reference, it is submitted that the Leonard reference also does not render independent claim 17 obvious.

The Davis Reference

The Davis reference teaches a measuring valve including a piston 146. However, as will be explained below, the Davis reference does not teach or even suggest (1) a valve piston having a bore; or (2) a valve piston having a structural arrangement so as to be operable to move within a housing (i.e., perform the necessary functions) as recited in independent claim 17.

In the outstanding Office Action, the Examiner asserted that the Davis reference teaches a valve piston which comprises the combination of valve 142, cylindrical member 156, and washer 166. Although the Examiner asserted (without support) that the “valve piston” 146, 156, 166 has a bore, this combination of elements identified by the Examiner as constituting a valve piston does not have a bore for allowing lubricant to flow therethrough, as required by independent claim 17.

The Examiner also very broadly interpreted the hollow supporting body of independent claim 17 as corresponding to the sleeve 154 of the Davis reference. However, the sleeve 154 does not support and provide leverage for each of a first return spring and a second return spring. Instead, the lower inside shoulder of piston 146 supports and provides leverage for one end of the second return spring 172, while the washer 180 supports and provides leverage for the second end of the second return spring.

Spring 168 is located inside the sleeve 154, while a second spring 172 is located outside the sleeve 154. On page 6 of the outstanding Office Action, the Examiner identified the dispensing chamber of independent claim 17 as “the chamber in the middle where the springs are located.” Unfortunately, it is relatively difficult to address this specific point due to the vague nature of the Examiner’s statement, and particularly the ambiguous meaning of the term “middle.” However, it *appears* that the Examiner is asserting that the area inside of lower tubular member 150 is the “dispensing chamber”. The Examiner has also identified the chamber above the piston 146 (identified with reference number 144) as the “metering chamber.” Although it is again unclear how the Examiner is interpreting the “connecting passage,” the most reasonable interpretation is that the connecting passage corresponds to bypass 194. Thus, Figure 1 arguably illustrates that the “dispensing chamber” identified by the Examiner

communicates with the “metering chamber” 144 through bypass (connecting passage) 194. However, as noted above, the valve piston does not have a bore that allows the dispensing chamber to communicate with the metering chamber. Therefore, under the Examiner’s apparent interpretation, the Davis reference does not teach a valve piston that can be positioned in a valve piston starting position such that the *bore of the valve piston* allows a dispensing chamber between the dispensing piston and the valve piston to communicate with the metering chamber *via a connecting passage*. Furthermore, the valve piston cannot be arranged in an intermediate position in which the valve piston blocks the dispensing chamber from communicating with the metering chamber *via the connecting passage*.

More generally, the “valve piston” 142, 156, 166 identified by the Examiner does not affect flow through the bypass (connecting passage) 194. Therefore, the valve piston 142, 156, 166 as identified by the Examiner does not either *allow* communication or *block* communication between the dispensing chamber and the metering chamber *via the connecting passage* (bypass 194).

As explained above, the Davis reference does not teach or suggest a valve piston having a bore, a hollow spring supporting body supporting both springs, or a valve piston arranged in combination with other components of a distributor element so as to be operable to perform the functions recited in claim 17. Accordingly, it is submitted that the Davis reference does not anticipate independent claim 17. Furthermore, because the Davis reference does not even suggest the features recited in claim 17, it is submitted that the Davis reference also does not obviate independent claim 17.

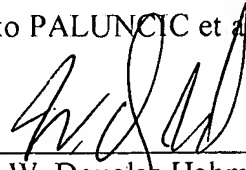
In view of the fact that independent claim 17 is not anticipated by, or rendered obvious by, either the Leonard reference or the Davis reference, it is respectfully submitted that independent claim 17 and the claims that depend therefrom are clearly patentable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. However, if the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact the Applicant's undersigned representative.

Respectfully submitted,

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